

# Introduction to Protected Shoreland

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# SHORELAND WATER QUALITY PROTECTION ACT:

## WHAT'S THE PURPOSE?



Maintain and Restore  
Vegetated Buffers

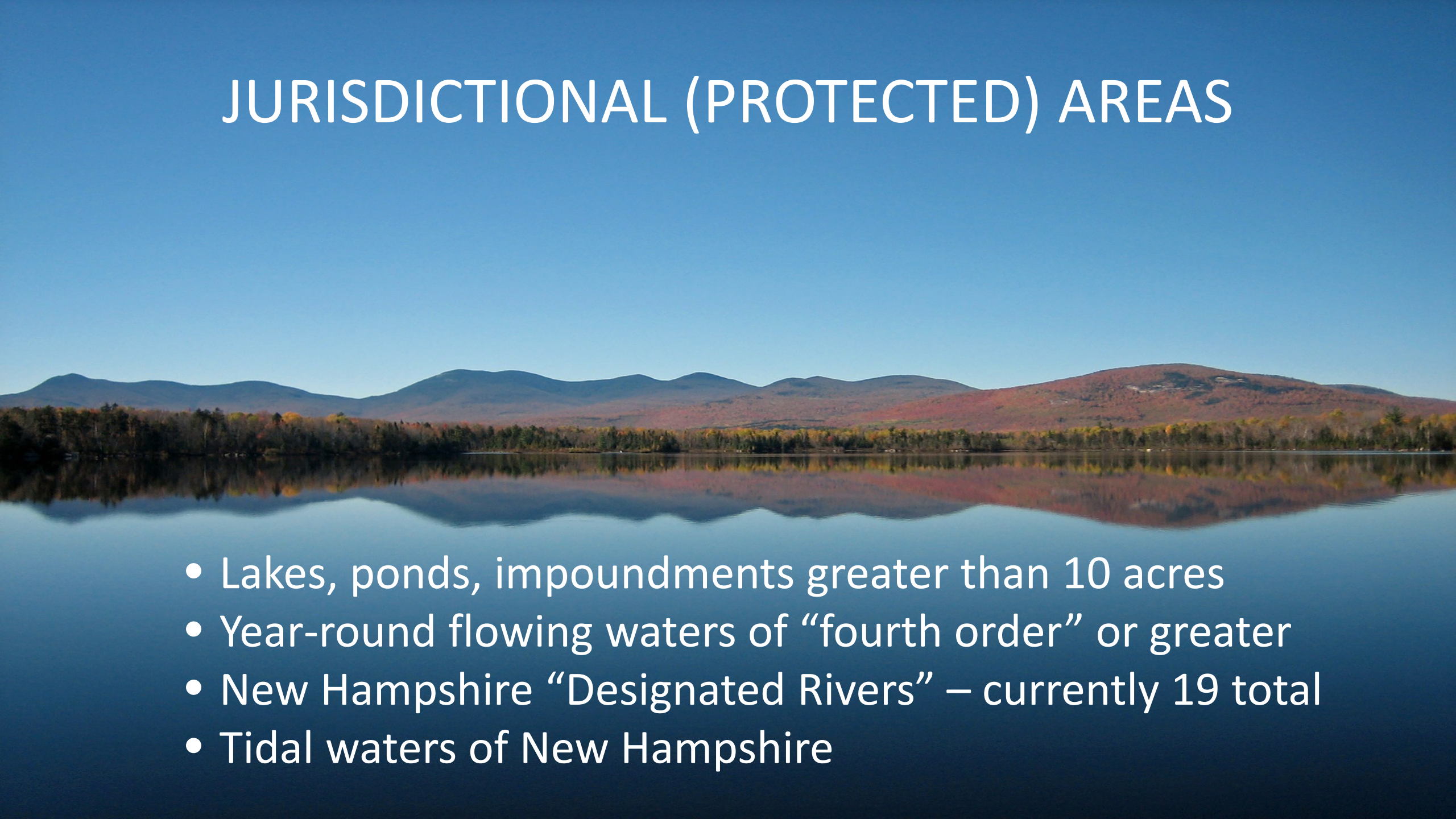


Manage or Improve  
Stormwater Runoff



Provide Critical Wildlife  
Habitat

# JURISDICTIONAL (PROTECTED) AREAS

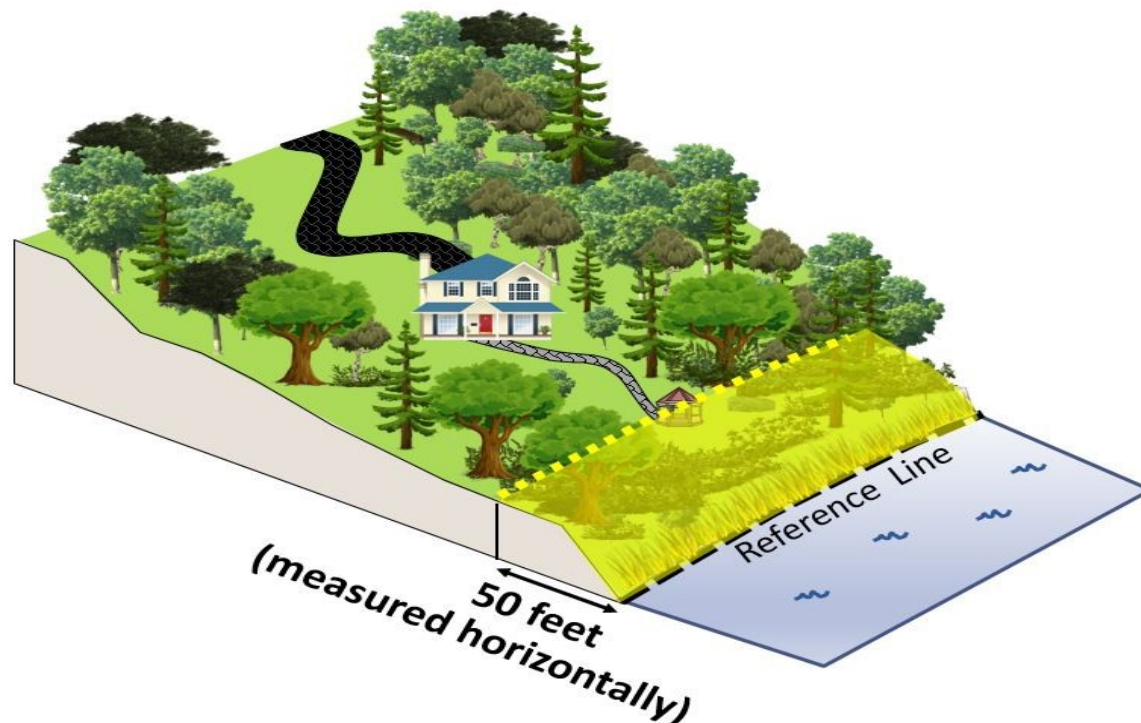
- 
- Lakes, ponds, impoundments greater than 10 acres
  - Year-round flowing waters of “fourth order” or greater
  - New Hampshire “Designated Rivers” – currently 19 total
  - Tidal waters of New Hampshire



# In 10+ Acre Lakes, Ponds and Impoundments: Reference Line is Fixed

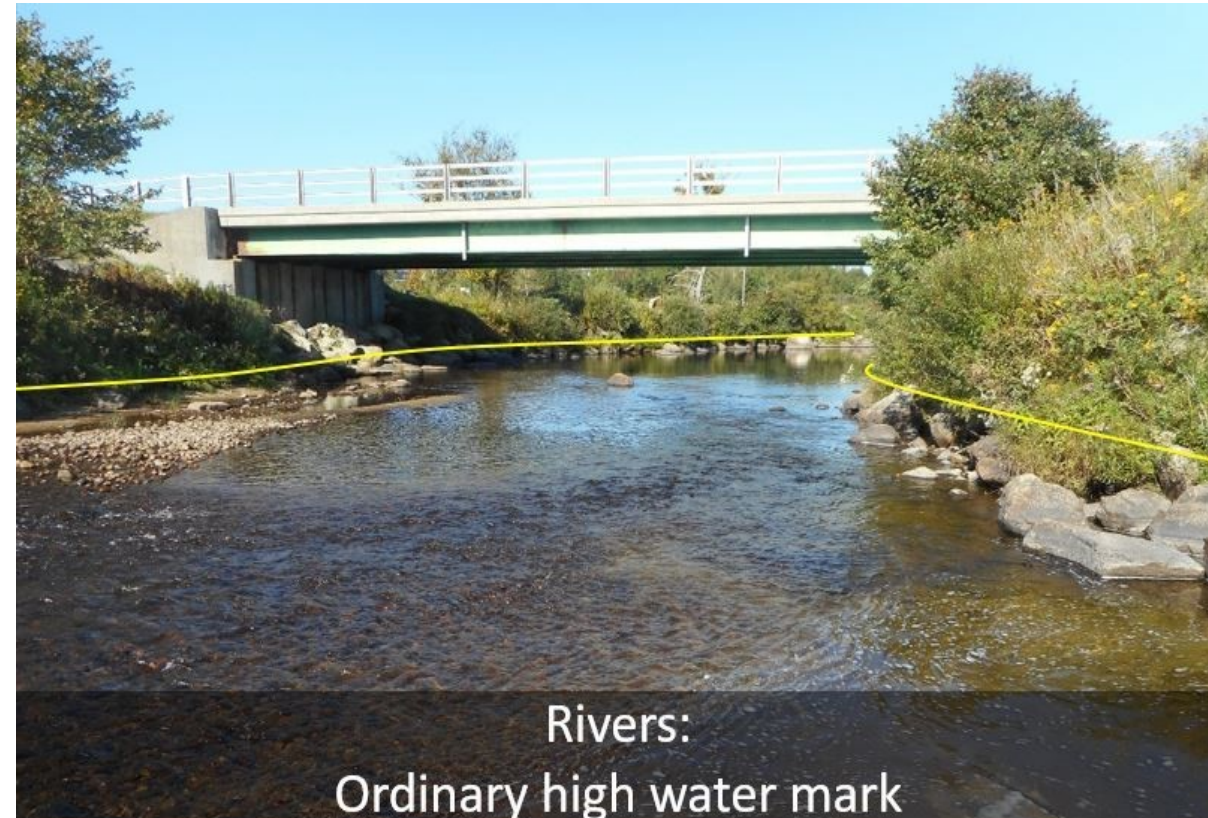
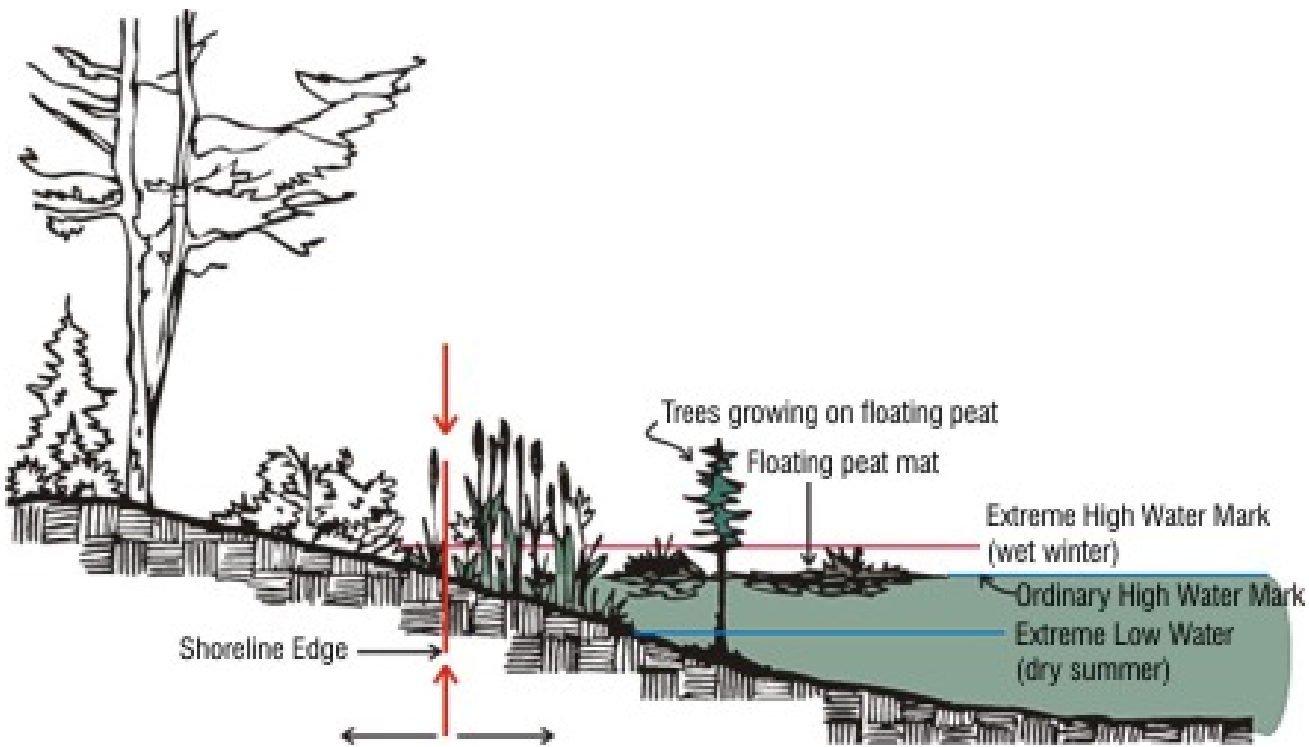
- Reference Line = Surface Elevation
- See “Consolidated List of Waterbodies...” (Excerpt Pictured Here)

## Waterfront Buffer



Lakes and Ponds	a.k.a.	Surface Elevation "Reference Line" (ft above sea level)
Alton Power Dam	Wentworth Pond	526
Bear Pond		890
Gilman Pond		755
Halfmoon Lake		640
Hills Pond		809
Knights Pond		655
Marsh Pond		590
Meadows Pond	Meadow Mountain Pond	681
Sunset Lake	Places Pond	808
Winnepesaukee Lake		504.32
Baboosic Lake		231
Honey Pot Pond		217
Joe English Pond		498
Stump Pond		190
Weston Pond		235
Adder Pond	Hopkins Pond	640
Bradley Lake		828
Cole Pond		1081
Elbow Pond		616
Highland Lake		645
Horseshoe Pond		610

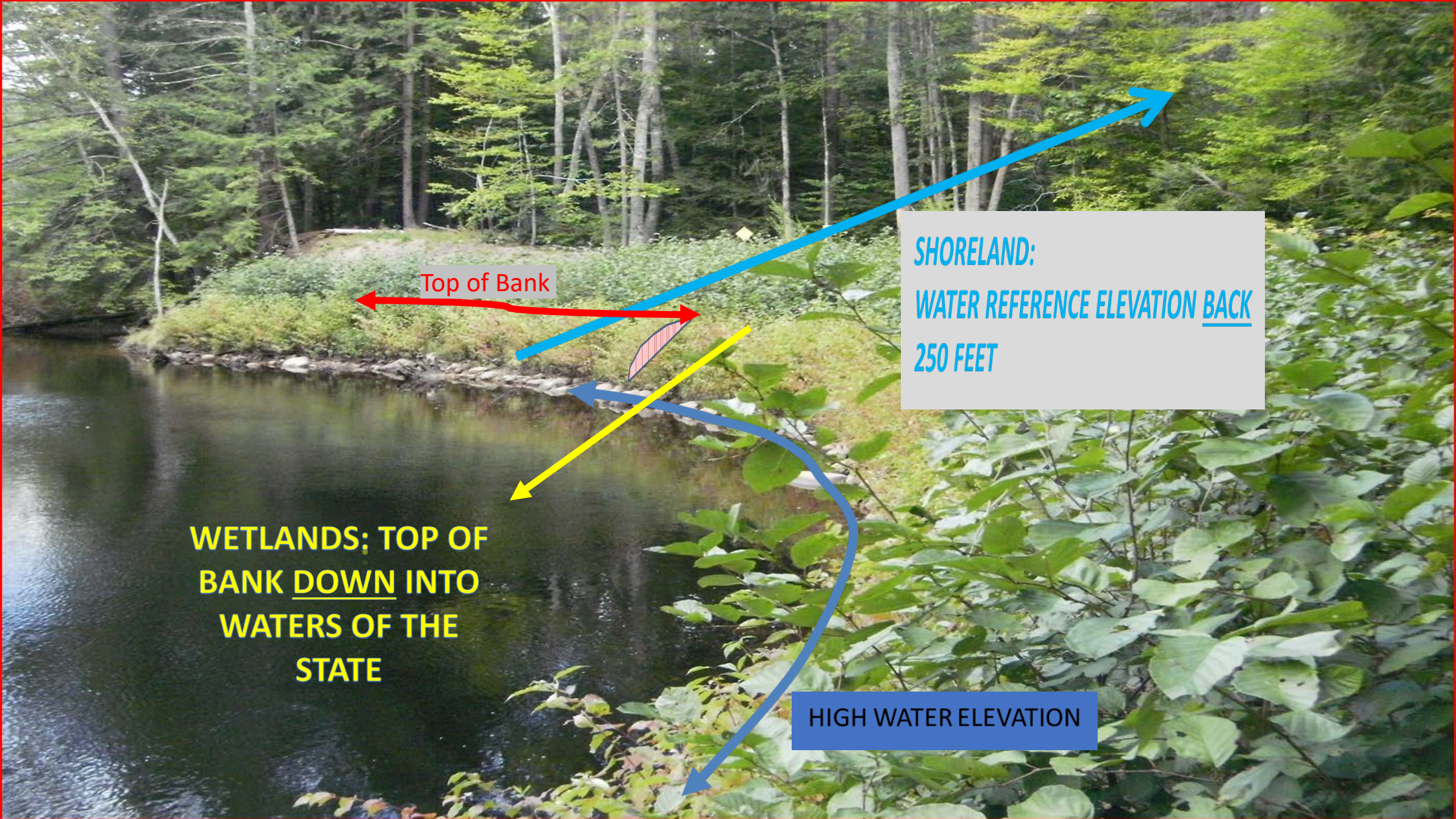
# In Designated Rivers and Year-Round Flowing Waters of Fourth Order or Higher, Reference Line = Ordinary High Water Mark



# Shoreland Jurisdictional Areas

Lines, Setbacks, Buffers, Limits





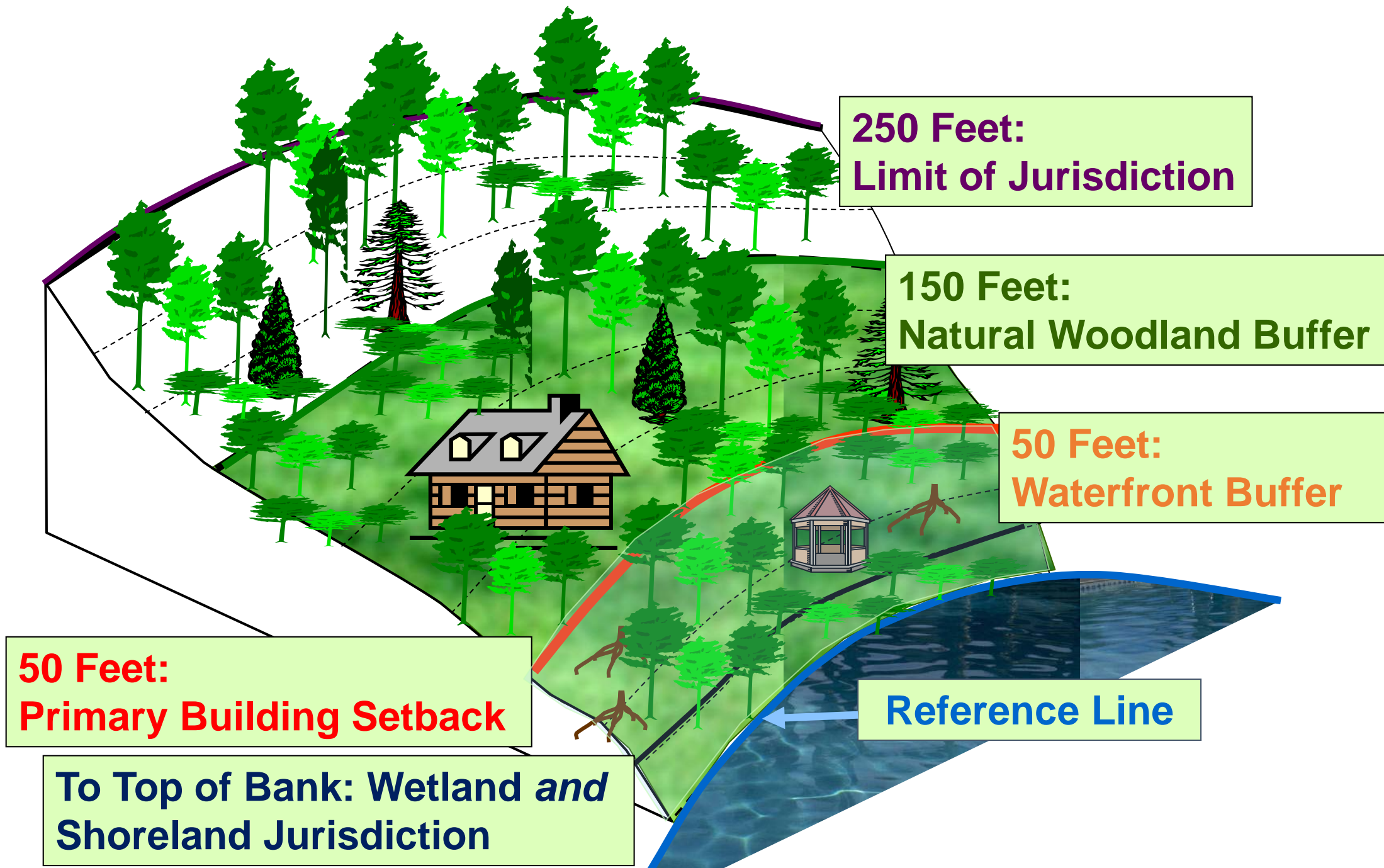
Top of Bank

SHORELAND:  
WATER REFERENCE ELEVATION BACK  
250 FEET

WETLANDS; TOP OF  
BANK DOWN INTO  
WATERS OF THE  
STATE

HIGH WATER ELEVATION



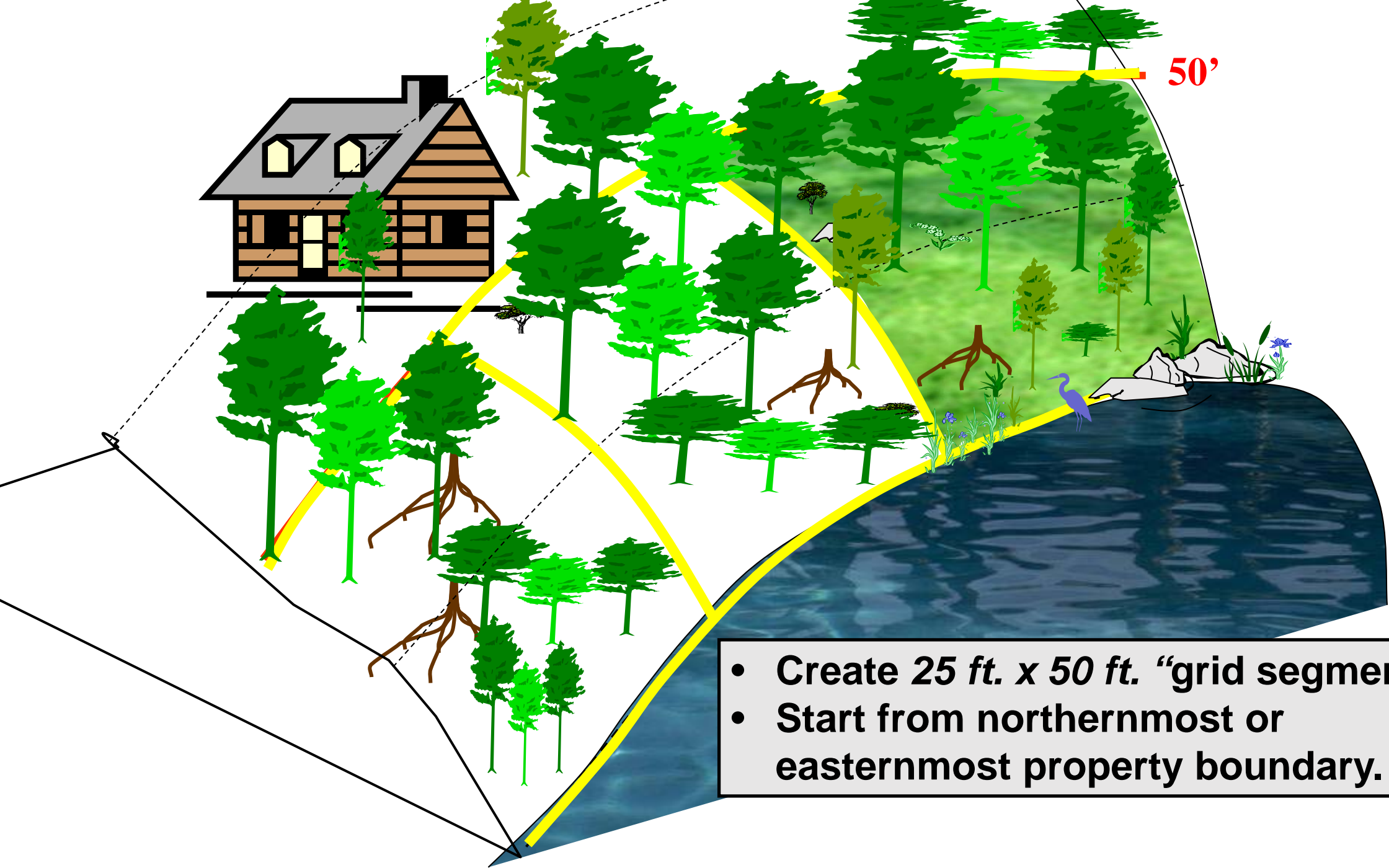




# Waterfront Buffer Restrictions

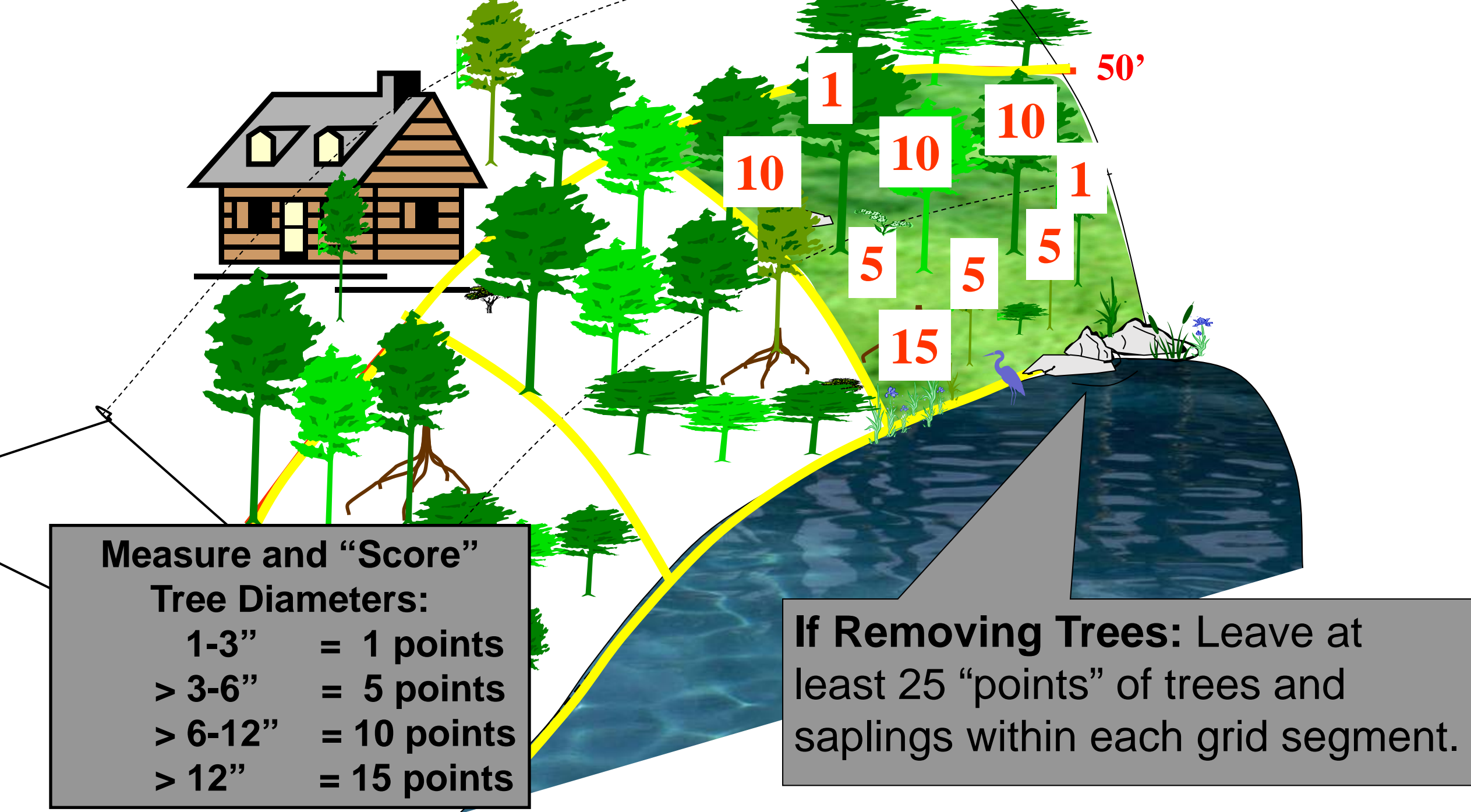
- **Natural ground cover:** removal prohibited.
  - **Shrub height:** cut to no lower than 3 feet.
  - **Trees or sapling removal:** create “grids” and calculate “points.”
- 





- Create 25 ft. x 50 ft. “grid segments.”
- Start from northernmost or easternmost property boundary.







## Natural Woodland Buffer Restrictions



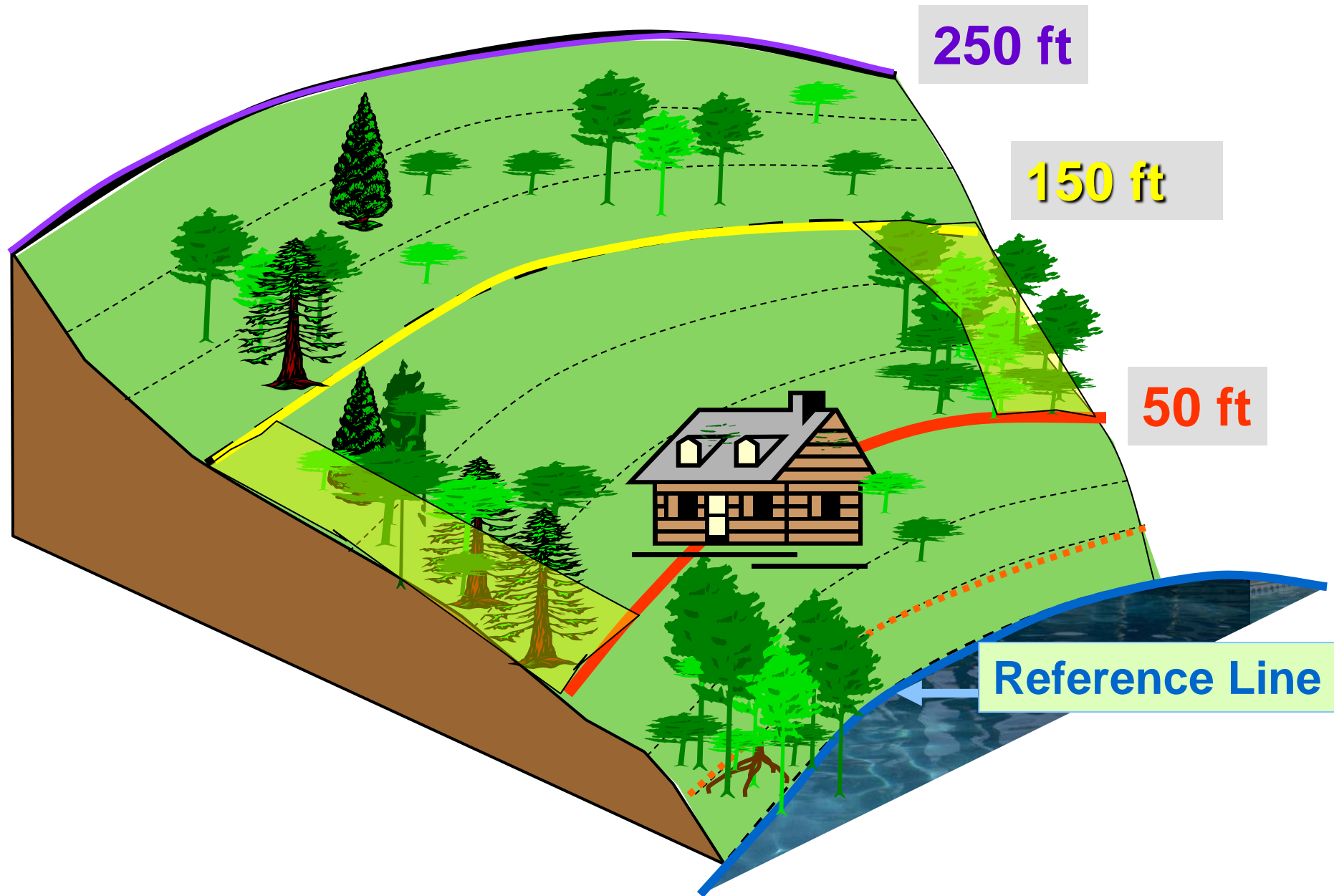
# Natural Woodland Buffer

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- **Unaltered State Requirement:**
  - Limit vegetation removal between 50-150 feet of Reference Line.
  - Allow natural, native vegetation to grow without disturbance, including ground cover.

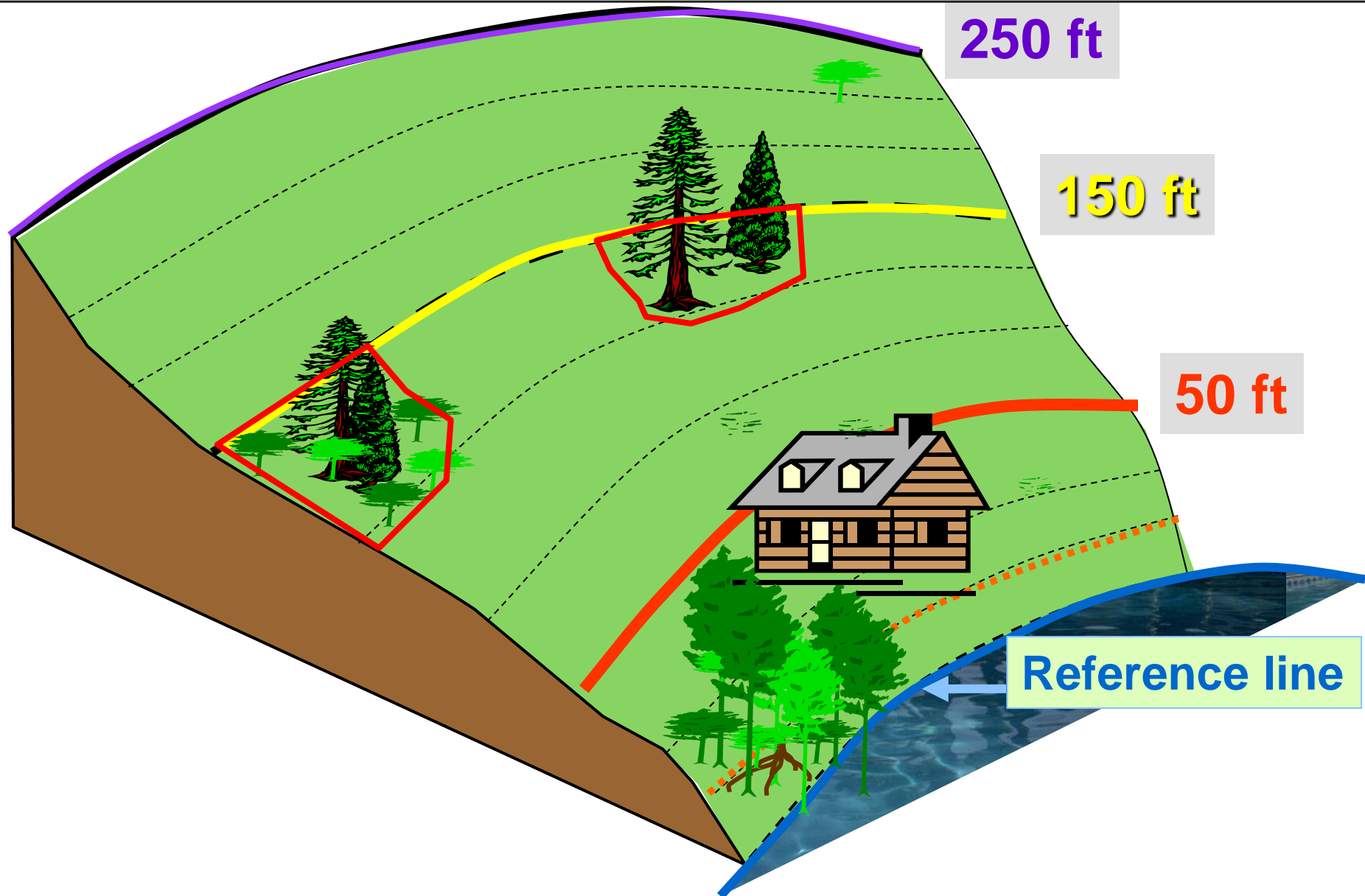


# Unaltered State: Single Contiguous Area not Required





# Woodland Buffer Reduction: If Already Below 25%, Can't Go Below What Exists Today



**Existing Open Areas, Waterfront Buffer: “Grandfathered”**  
**Existing Landscaped Areas or Gardens: Still not “Natural Ground Cover”**



Existing lawns can be maintained.

*Ground covers* must remain intact.



# Further Reading: Vegetation Management for Water Quality

## WATERFRONT BUFFER REQUIREMENTS

Within 50 feet of the reference line, ground cover and shrubs may **not** be removed and replaced with landscaping or lawn. They may only be removed to provide a single 6-foot wide footpath to the water or to structures in the waterfront buffer (a shoreland permit may be required). Ground cover and shrubs may only be trimmed to a height of no less than 3 feet (Figure 2).

Trees may also be pruned as long as the health of the tree is not endangered. Pruning only the bottom 1/3 of a tree is recommended to maintain property aesthetics and tree health. Always determine if a tree can be pruned before removing it. Pruning trees often increases views while providing wildlife habitat, privacy, and retaining shade.

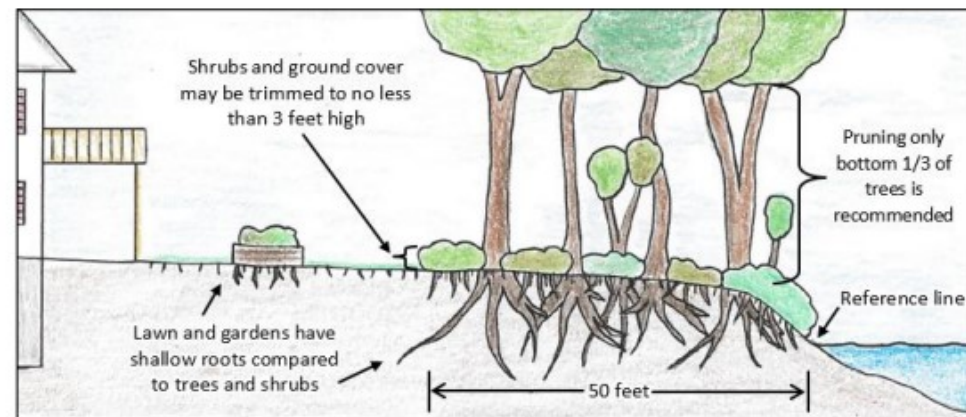


Figure 2 - Waterfront buffer profile view.

Removing trees and saplings within the waterfront buffer *may* be permissible, but there are limitations based on a grid segment and point score system. Property owners must maintain a minimum tree and sapling point score within each "grid segment" in their waterfront buffer. They cannot remove trees or saplings from a segment that does not meet this minimum point score. To determine if trees or saplings can be removed, beginning from the northern or eastern property boundary, divide the waterfront buffer into grid segments that are 25 feet along the shore by 50 feet inland (see Figure 3). Properties that have shoreland frontage that does not divide to an even number of 25-foot segments require points in the last segment in proportion to the area of the last segment.

Next, to determine if trees can be removed from a grid segment, calculate the grid segment's total tree and sapling point score. Each tree is awarded a point score based on its trunk diameter (width) 4½ feet above the ground (Figure 4). Dead, diseased or dying trees are not awarded points.

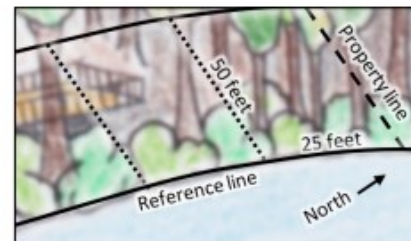


Figure 3 - Mapping out each grid segment.

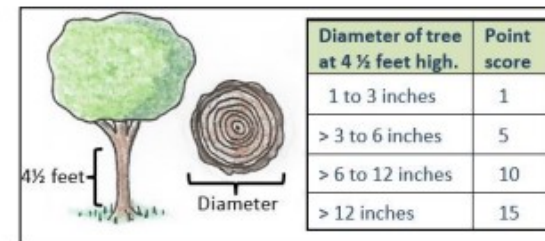


Figure 4 - Scoring each tree by its trunk width.





# Impervious Surfaces

Limits from New Hampshire Statute and Rule



# WHAT ARE IMPERVIOUS SURFACES?

Modified surfaces that cannot effectively absorb or infiltrate water, unless specifically designed to do so. Common examples include:

- Roofs
- Decks
- Patios
- Walkways
- Paved-gravel-crushed stone driveways





# Impervious Surface Thresholds

**To propose more than 20% impervious area:**

- A stormwater management plan must be implemented, to infiltrate the resulting increased stormwater result from development.

**To propose more than 30% impervious area:**

- If any grid segment does not meet the minimum required grid score (25 pts), an equivalent level of protection must be planted to at least meet the minimum required grid score.
- A stormwater management plan must be designed and installed by a licensed professional engineer.



# Stormwater Management Examples



# Pesticides and Fertilizers in Protected Shoreland

Use is Restricted

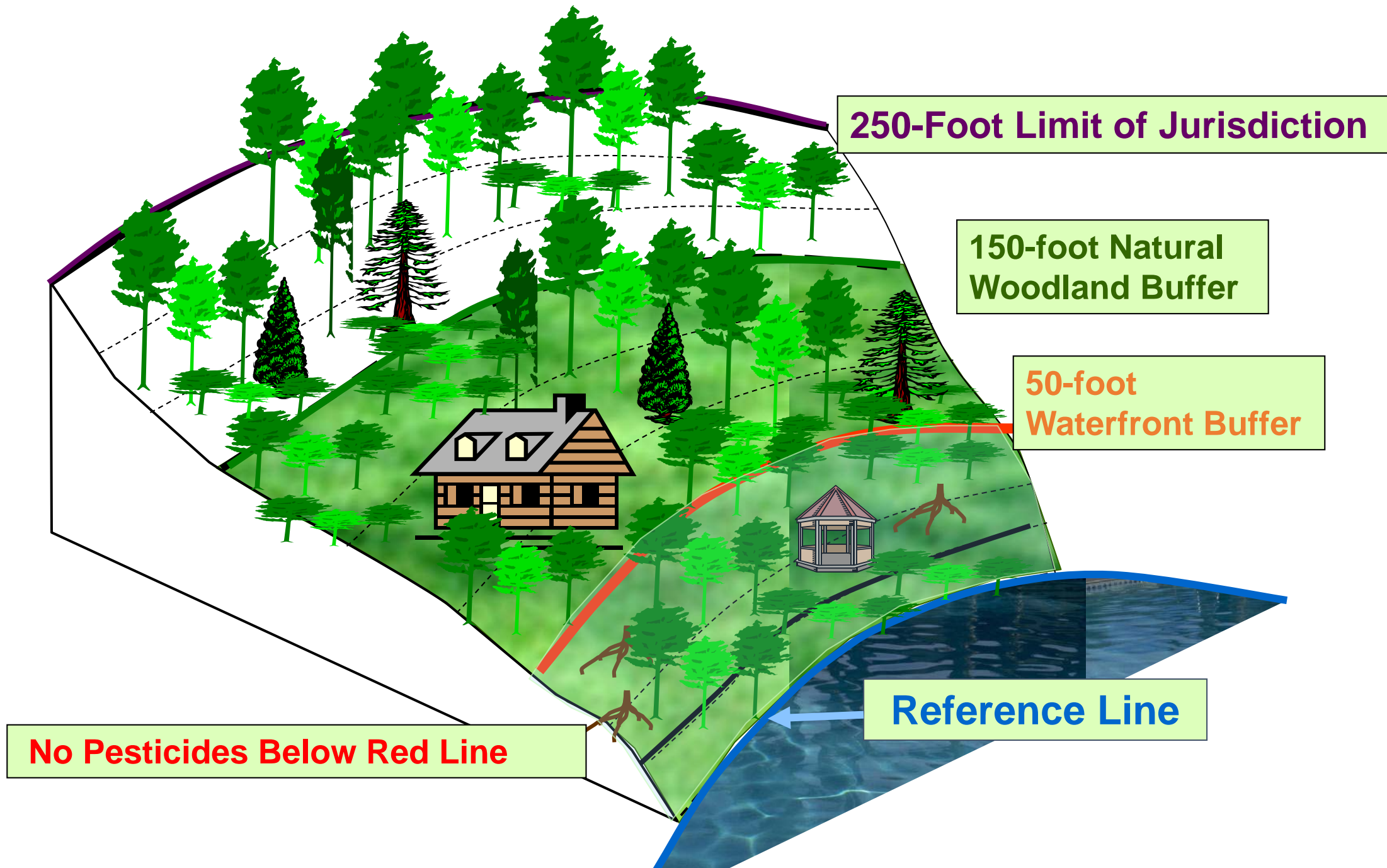




# Chemicals: What and Where

- **Within 25 feet of Reference Line:**
  - Fertilizers prohibited – all public waters.
- **Within 50 feet of Reference Line:**
  - All chemicals prohibited - including herbicides or chemical fertilizers – except when applied by a state-licensed professional.
- **Between 50-250 feet from Reference Line:**
  - Only slow- or controlled-release fertilizers.
- **Low Phosphate, Slow-Release Nitrogen:**
  - Label must guarantee at most 2% phosphorous.
  - Nitrogen components must be at least 50% slow-release.
  - Includes organic pesticides.
- **Fact Sheet - [Pesticide Use Within the Protected Shoreland](#)**







# Contact Us

## Wetland or Shoreland Questions:

- [shoreland@des.nh.gov](mailto:shoreland@des.nh.gov)
- (603) 271-3501
- Ask for Inspector of the Day

## Subsurface (Septic) Questions:

- (603) 271-3501
- Ask for Reviewer of the Day

## General Wetland Questions:

- [lrn@des.nh.gov](mailto:lrn@des.nh.gov)



# Protected Shoreland Permit Tips



# Shoreland Permit-by-Notification: Is Your Proposed Project Eligible?

- Less than 1,500 square feet total impact.
- No more than 900 square feet net increase in impervious area.
- Stormwater management improvements, erosion control, or environmental restoration or enhancement.
- Maintenance, repair, and improvement of public utilities, public roads, and public access facilities.
- Geotechnical borings, test wells, drinking water wells or remediations that meet requirements of relevant state statutes and rules



# Shoreland Permit Tips: Assess Wildlife First

- ☐ **Before you apply** - Use Natural Heritage Bureau (NHB) DataCheck to check for threatened and endangered species before you apply.
- ☐ **If negative result** - Add “Determination Letter” to your permit application.
- ☐ **If positive “hit” (result)** – Follow the directions of your NHB report to contact the appropriate agency and review your proposal. Include their consultation - and the report - with your permit application.







## Shoreland Permit Tips Cont'd.

### Confirm Complete Shoreland Application:

- ☐ **Natural Heritage Bureau DataCheck Results** – and/or consultation(s) and outcome(s).
- ☐ **Photos** of proposed impacted area.
- ☐ **Photos** of Woodland Buffer.
- ☐ **Waterfront Buffer Grid and Point System** - trees and saplings – *if* included in proposed work site.
- ☐ **Certified Mail Receipt Copy** – provide certificates or copies of receipts. Prove you notified abutters, the municipality, and where applicable your local river or lake advisory committee, by mail, about your application and plan. *Must be certified mail. Signed statements are insufficient.*

# Shoreland Septic Systems

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Within protected shoreland, to propose septic system construction or apply for Alteration of Terrain or Excavating and Dredging permits:

- **You must include photos** of any “woodland buffer” areas in which impacts would occur.
- **This is a common deficiency** in permit applications.
- **Any deficiencies may result in delays.**



# Shoreland Septic Systems Cont'd.

Setback requirements for new leaching portions of new systems are based on receiving soil characteristics and United States Department of Agricultural Natural Resource Conservation Service drainage classes.

## Adjacent to Ponds, Lakes, Estuaries, Open Ocean:

- *At least 125ft. from Reference Line:* where receiving soil downgradient is a porous sand and gravel material with a percolation rate equal to or faster than 2 minutes per inch
- *At least 100ft. from Reference Line:* soils with restrictive layers within 18in. of natural soil surface.
- *At least 75ft. from Reference Line:* all other soil conditions

## Adjacent to Rivers:

- *At least 75ft. from Reference Line.*





## Minimum Lots and Residential Development in Protected Shoreland

- *“...minimum size for new lots in areas dependent upon on-site septic systems shall be determined by soil type lot size determinations, as established by the department of environmental services under RSA 485-A and rules adopted to implement it.”*
- *“...minimum size for new non-residential lots in areas dependent upon on-site septic systems shall be determined by soil type lot size determinations, as set forth under rules adopted under RSA 541-A.”*
- *“No lot having frontage on public water shall be created with less than 150 feet of shoreland frontage.”*



# Digging Test Pits

- Avoid disturbing ground cover within 50 feet of reference line.
- Avoid digging test pits within 75 feet of Reference Line - unless evaluating eligibility for a replacement system.







## Selling Developed Waterfront Property: Septic System Considerations

### **BEFORE ANY PURCHASE AND SALE AGREEMENT**

- For any developed waterfront property using a septic disposal system, owners shall, at their expense, engage a permitted subsurface sewer or waste disposal system designer to perform an on-site assessment study.

### **SITE ASSESSMENT STUDY**

- Must be conducted when *any* part of the property is within 200 feet of the Reference Line - not just the structure or septic system.

### **SELLER MUST HIRE A PERMITTED DESIGNER**

- To determine if your site meets current septic standards. We (NHDES) do not receive this study. You must transfer it from seller to buyer as part of the purchase and sales agreement.

## To Install or Repair a Septic System, Do I Need a Shoreland Permit?

**Yes: “New or Expansion of Use”** - new systems on previously undeveloped lots, and installation of replacement systems that must occur as a result of proposed increases in sewerage loading from the existing structure(s) require a shoreland impact permit.

**No: If an existing system fails,** and it can be replaced in-kind or under new approval, and it serves no increase in sewerage loading, a shoreland impact permit is not required.



# What are “Temporary Impact” Areas?

Areas impacted by regrading, excavation, and filling that *temporarily* expose ground and underlying soils to stormwater. Examples:

- Areas excavated and/ or regraded to prep sites for new construction.
- Excavation and regrading beyond the limits of a new foundation.
- *Areas associated with installing a temporary access way.*
- *Areas associated with installing a new septic system.*

## If I Have a Wetlands Permit, Do I Need a Shoreland Permit?

- **No:** “Impacts” covered under wetlands permits do not require separate shoreland permits for the *same* impacts.
  - **Example:** constructing a beach within protected shoreland - if that impact is covered under your wetlands permit, it does not require a separate shoreland permit.
- **Yes:** “Impacts” *not* covered under wetlands permits do require separate shoreland permits.
  - **Example:** proposed impacts to access a beach – temporary and permanent - do require separate shoreland permits.



# How Do I Make a Complaint?

- [des.nh.gov/complaints](https://des.nh.gov/complaints)
- For wetlands, including shorelands, only written complaints can be acted upon.
- Anonymous complaints cannot be acted upon.
- You may complain through a local organization such as your conservation commission, lake association, or code enforcement office.
- The most common complaints are about docking structures.
- The most serious and highest priority complaints are about immediate threats to water quality.

# How Can I Find Water Quality Info on Lakes and Rivers?

- Wetlands Bureau permitting protects water quality by regulating structures and impacts.
- However, additional resources are also available!
  - [des.nh.gov/water/healthy-swimming](https://des.nh.gov/water/healthy-swimming)
  - [des.nh.gov/water/rivers-and-lakes](https://des.nh.gov/water/rivers-and-lakes)
- Volunteer Lake Association Program (VLAP)
- Volunteer River Association Program (VRAP)



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